MILATARI EVENTS
OCT 18,1986

2:30PM	ST SIG / Action/C Class
3:30PM	Business Meeting
4:00PM	Demos

At:
Armbruster School
7000 Greenway
Greenfield, WI

Oct 20,1986 7:30PM

Board of Directors Meeting Ground Round Hwy 100 & Bluemound

Nov 8,1986

7:30PM Computer Languages Workshop for 8 & 16 Bit Machines
Waukesha State Bank Community Room 110 Madison Street Waukesha
If you need directions you'll get lost but call Dave Frazer or Gary Nolan
542-7242   353-9716

Mil*Atari BOARD MEETING MINUTES 8-25-86
7:30 pm Bluemound Ground Round

Thirsty Officers/Members Present:

Ron Friedel	(Prezadent)
Steve Tupper	(Vice Prezadent)
Carl Mielcarek	(Treazurer)
Dennis Wilson	(Disk Librarian)
Roy Duvall	(Newsletter)
Gary Nolan	(Fuzzy ex-prez. I)
Bob Bubinger	(at large)
Peter Kurth	(Dr. 'Mod' at large)
David Fraser	(ex-prez. II)
Steve Armstrong	(Our Secretary)
Ann & Ray Hill	(members at large)

Members Missing and Unaccounted for:

UNKNOWN LEADER	(ST Sig)
Rich Dankert	(BBS)
Bill Feest	(Publications)
Lee Musial	(Cassette Librarian)
You	(concerned member)
And You!	(unconcerned member)

MOTION: Approve June 21, 1986 Minutes
with the correction that an ST SIG
Leader not yet been found.

Mvd: Dave F.
Scd: Gary N.
Crd: Ayes

Mil*Atari's Officers Report:

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V.P. Steve T.: Upcoming Events
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09/86 Peter Kurth will demo
GRAPHIC ARTIST for ST

Surveys to be collected
Prizes awarded

10/86 To be announced
11/86 To be announced
12/86 To be announced

++++++++++++++++++++++++
Treasurer Carl M.: Report
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Income & Expenses reported
Bills presented

MOTION: Board Authorizes
Payment of Bills

Mvd:Dave F.
Scd:Peter K.
Crd:Unanimous

Last month the Board asked that
An Income and Expense Report
be prepared at the end of each
month by Carl M. to be published
monthly. See newsletter.
Summary: 'treading water' as
usual for end of summer.

Carl accepted responsibility for
running annual Christmas Contest.

The Board commended Carl M. for the
fine Picnic site and preparations.
Members enjoyed the weather, food,
volleyball, and their families.

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Secretary Steve A: Report
+++++++++++++++++++++++++++

BASIC Class ended July 1986. If
survey results indicate need for
any more BASIC classes then another
class will be formed.

Club survey went out in August
newsletter. First returns already
in. BRING COMPLETED SURVEYS TO
SEPTEMBER MEETING FOR DOORPRIZE!

Working with Ray Hill to develop
C/ACTION! Educational SIG for fall.
Board approved $20 tuition for SIG.
Club to get 30% of tuition paid.
SIG Orientation and registration at
September meeting. Course outline
distributed at registration.
Lessons prepared for each meeting.

+++++++++++++++++++++++++++++++++
Disk Librarian Dennis W: Report
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Last month three positions were
created as follows:

- ST Librarian (Dennis W)
- 8-bit Librarian (being asked)
- disk sales cashier (being asked)

Candidates have been contacted.
We await their word of acceptance.

ST PD Disk collection expanding fast
   50 available disks! More coming!

PROPOSAL: Start commercial library
with donations--such as ZOOMRACKS.
ST owners please contribute to
this library so all benefit!

PROPOSAL: Make Double-Sided disks
out of old club disk stock to move
this old inventory.

Dennis will implement his proposals.

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BBS SYSOP
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Richard Dankert: NO REPORT
                  Absent

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Cassette Librarian
+++++++++++++++++++++++++++++++++++
Lee Musial: NO REPORT
             Absent

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Publications Librarian
+++++++++++++++++++++++++++++++++++
Bill F.: NO REPORT
          Absent

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New Business: Fuzzy & Frazer

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Gary and Dave proposed computer
workshops to be held on the first
Wednesday evening of the month for
the fall. They asked for Mil*Atari
sponsorship with club members
providing systems and skills.

October' topic: TELECOMMUNICATIONS
with demos of FILE TRANSFERS between
various machines. GENIE, SOURCE and
other telecom services would be
demonstrated. Waukesha State Bank
can provide 5 telephone lines for
this workshop. Attendees would be
encouraged to bring their own systems
and to buy disks prepared by the club
for the workshop.

November's topic: Programming
Languages: ACTION!, ASSEMBLER, BASIC,
C, FORTH, PASCAL, etc. Each language
would be outlined with discussion of
merits, uses and limitations of each.
Bring your system and try out a new
language.

December's topic: Word Processing
covering text formatting, printing
and graphics using various printers
software and systems.

Future workshop topics: database,
electronic publishing, spreadsheets.

Volunteers are sought to help out.
If you know how to use software
consider helping at the workshops.

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New Business: Ann Hill's Survey
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Ann Hill, a master's degree candidate
at UWM, proposed to survey the club
regarding the impact of the computer
on families. She will prepare the
survey under the guidance of her
research professor and include it
with the October Newsletter. She
offered to exchange information and
publish her findings in the club
newsletter.

MOTION: The club will distribute
Ann Hill's survey with explanatory
article in the October newsletter.
Ann will write an article about her
findings in the newsletter. Club
members are encouraged to cooperate
as Ann needs at least 75% of the
surveys returned by the November
meeting in order to complete her
work. Ann will provide stamped
self-addressed returnable surveys.
The club to provide access to our
own survey results. (Raw data to
remain confidential of course).

Mvd: Steve Tupper
Scd: Gary Nolan
Crd: Ayes

Meeting adjourned 8:45 pm.

The President's Notes
by Ron Friedel

Last month, I did not have the chance to talk about our picnic in August. I think that all who attended will agree that we had a good time. The picnic site, Falk Park, was almost ideal; I don't think that many of us knew about it before. There are a few people who gave something to the picnic. I would like to thank Lee Musial, Emma Gifford and Carl Mielcarek for their donations of food , beer and materials. We had a volleyball game going almost continually; MILATARI people take their game playing seriously!

The Saturday, Sept. 20, Milwaukee Sentinel had a little blurb of interest to Atari owners. Atari has announced that it has filed to sell 4.5 million shares of stock to the public. They expect to raise $50 million from the sale. I believe that this will be good for the users because Atari has appeared to be spreading itself too thin. This money may help get some of the promised products (like the 80-column card, MS-DOS emulator, 1200 baud modem & 32-bit super micro) onto the dealers shelves. So get yourself a share of Atari stock if you have $15 to $20 to invest.

One of the local places that used to service Atari Computers offered to sell all of its' spare parts to us at the last meeting. I got a bit greedy and bought all the parts for myself. I can use some of the parts myself but if you need anything don't hesitate to call me. The service place will probably donate it's service and tech manuals to us. MILATARI is truely your "Atari Resource".

Gary Nolan and Dave Frazer, our ex-presidents, are taking the time and making the effort to run a series of workshops on selected subjects of interest to all of us. The first workshop on telecommunications will have been already held by the time you get this newsletter but reserve Wednesday, the 5th of November, for an in-depth look at word processors. These workshops will be held at our old home, the Community Room of Waukesha State Bank. These workshops will cover applications for both the 8 & 16-bit computers. I would like to see a good turnout for these sessions. It is very discouraging to prepare and set up a session and then have only a very few people show up. I am sure that we all will learn something at these workshops. So reserve the first Wednesday of every month for a MILATARI workshop.

We had a good number of questionnaires returned to us at the September meeting. We intend to look at these and try to figure out what it is that you want from the club. We will keep you posted on the results. We are also still accepting questionnaires. We really do want your input!

At our general meeting in September, we had a discussion about where we should hold our Saturday meetings in the future. We decided at the board meeting to ask the members in attendance at the November meeting to vote on two alternatives. This vote will guide us in our choice of a possible new meeting site. For now, we are planning to stay at Armbruster School through at least the end of the year.

Also the board voted to raise dues by $5 for both single and family memberships. This requires membership approval so if you object speak up at the next few meetings. The vote is scheduled for the November meeting.

You may be hearing some public service announcements about the MILATARI meetings on the radio in the near future. Perhaps we will get more members this way; at least I hope so. There are lots of Atari Computers out there and they do not deserve to be stashed away in the closet.

Carl Mielcarek has asked me to announce the Third Holiday Programming Contest. The contest is open to members only. There will be three age groups, under 12, 12 to 16, and 17 and older. Judging will be done by those members attending the December meeting at Armbruster School. Further details will be announced in the next newsletter. So for now, get started on a winning program and good luck.

I am still offering to hold a beginners SIG at my house on the Tuesdays nights before the Saturday general meeting. The date for

PROFESSIONAL GEM by Tim Oren

Column #10 VDI Graphics: Text Output

This issue of ST PRO GEM concludes the two column series on VDI with a look at simple VDI text output, and ways to optimize its speed.

To keep the size of this first discussion of text within reason, I am going to restrict it to use of the mono-spaced system font in its default size and orientation. Discussion of alternate and proportionally spaced fonts, baseline rotation, and character scaling will become a later article in this series.

DEFINITIONS. This article makes use of some terminology which may be unfamiliar if you have not used digital typefaces. A mono-spaced font is one in which each character occupies an identically wide space on the screen. A proportional font has characters which occupy different widths. For instance, an 'l' would probably be narrower than a 'w'. Text may be "justified" right, left, or center. This means that the right character, left character, or center position of the text string is constrained to a given location. In common usage, a page of text is "ragged right" if its lines are left justified only. The text page is "fully justified", "justified" or (ambiguously) "right justified" if BOTH the left and right characters are contrained to fixed columns. Full justification is produced by inserting extra blank characters in the case of a mono-spaced font, or by adding extra pixel columns in the case of proportional output.

A text character (in a monospaced font) is written inside a standard sized cell or box. Vertically, the cell extends from the "top line" down to the "bottom line". If there are one or more blank lines at the top or bottom, they are called "leading" and are used to separate lines of text. The characters themselves always fall between the "ascent line", which is the highest line reached by characters such as 'd' and 'l', and the "descent line", which is the lowest line in characters like 'q' and 'g'. Other locations of interest are the "half line", which is the top of characters like 'a' or 'n', and the "base line", which is the bottom of characters which do not have descenders.

Before plunging into the Attribute Functions for text, you should note that the writing mode (vswr_mode) and clipping rectangle (vs_clip) attributes discussed in the last column (#9) also pertain to text. Since much of the discussion of text optimization will center on these attributes, you may want to review them.

TEXT ATTRIBUTES. The writing color for graphics text is set with the command:

vst_color(vdi_handle, color);
Vdi_handle is always the handle returned from graf_handle() at application startup. Color is a word value between 0 and 15 which designates the output color index. As discussed in previous columns, the actual color which appears is dependent on the current palette settings. In applications such as word and outline processors it is important that characters and their background provide good contrast to avoid eyestrain. In these situations, you may want to use the setPalette and/or setColor XBIOS functions to force the palette to a known state before starting the application.

You can choose a variety of special output effects for your text with the call:

vst_ effects(vdi_ handle, effects);
Effects is a single flag word, with the bits having the following significance:

0 Thicken
1 Lighten
2 Skew
3 Underline
4 Outline
5 Shadow
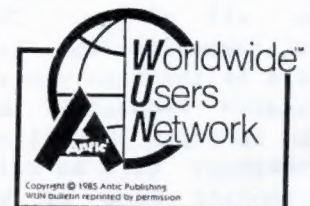
In each case, turning the bit on selects the effect. Otherwise, the effect is off. Any number of multiple effects may be selected, but the result may not always be pleasing or legible.

The "thicken" effect widens the character strokes by one pixel, resulting in the appearance of boldface type. The "lighten" effect superimposes a half-tone dither on the character. This mode is useful for indicating non-selectable text items, but is not legible enough for other purposes.

The skew effect shifts the rows of the character the right, with the greatest displacement at the top. This results in the appearance of italic text. You should be aware that the VDI does not compensate for this effect. This means that a skewed italic character which is immediately followed by a normal blank will be overstruck, and part of the top of the character will disappear. Likewise, a skewed character written to the left of an existing normal character will overstrike part of it. There is a related bug in the VDI clipping logic which may cause some parts of a skewed character not to be redrawn if they fall at the edge of a clipping rectangle, even though they should fall within the region.

The outline effect produces output which is a one pixel "halo" around the normal character. The shadow effect attempts to create a "drop shadow" to the side of the character. These effects should be used very sparingly with default sized fonts. They often result in illegible output.

When graphics text is written, a screen coordinate must be specified for the output. The relationship of the text to the screen point is determined by the call:

vst_alignment(vdi_handle, hin, vin, &hout, &vout);
Hin and vin are each words, with values specifying the desired horizontal and vertical alignment, respectively. Hout and vout receive the actual values set by the VDI. If they differ from the requested values, an error has occurred.

Hin may be set to zero for left justification, one for center justification, or two for right justification. The coordinate given when text is written becomes the "anchor point" as described in the definitions above. The default justification is left.

Vin determines what reference line of the text is positioned at the output coordinate. The selection values are:

0 baseline (default)
1 half line
2 ascent line
3 bottom line
4 descent line
5 top line

A common combination of alignments is left (0) and top line (5). This mode guarantees that all text output will lie to the right and below the output coordinate. This corresponds with the AES object and GRECT coordinate systems.

Finally, the call to do the actual output is:
v_gtext(vdi_handle, x, y, string);
X and y define the screen coordinate to be used as the alignment point. String is a pointer to a null terminated string, which must be total eighty characters or less, exclusive of the null. This limit is imposed by the size of the intin[] array in the VDI binding. Be warned that it is NOT checked in the standard binding! Exceeding it may cause memory to be overwritten.

One Inquire Function is useful with text output. The call
vqt_attributes(vdi_handle, attrib);
reads back the current attribute settings into the 10 word array attrib[]. The main items of interest are attrib[6] through attrib[9], which contain the width and height of characters, and the width and height of the character cell in the current font. You should rely on this function to obtain size information, rather than using the output of the graf_handle() function. On the ST, graf_handle() always returns sizes for the monochrome mode system font, which will be incorrect in the color screen modes.

Attrib[1] will contain the current graphics text color as set by vst_color(). Attrib[3] and [4] contain the horizontal and vertical alignment settings, respectively. Attrib[5] contains the current writing mode, as set by vswr_mode().

OPTIMIZATION. The most common complaint about using bit maps for character output is lack of speed. This section suggests ways to speed things up. By adopting all of these methods, you can realize an improvement of two to three times in speed.

BYTE ALIGNMENT. Since writing graphic text is essentially a bit-blit operation, characters which have "fringes", that is, do not align evenly with byte boundaries, will suffer performance penalities. The default system fonts in all resolutions of the ST are a multiple of eight pixels wide, so the problem reduces to assuring that each characters starts at a byte boundary in the screen bit map. This will be true if the horizontal pixel address of the left edge of the character is evenly divisible by eight.

Obviously, byte alignment is easiest to enforce when the horizontal justification is right or left. Doing so with centered text is possible, but requires adding padding blanks to odd length strings.

When writing text within windows, it is helpful to assure that the edges of the window working area are byte aligned. There is a section of code in the download which shows a technique for converting a user requested window position and/or size to its working dimensions, byte-aligning the width and horizontal position, and computing the adjusted external window coordinates.

WRITING MODE. The fastest text output mode is replace. All other modes require reading in the target raster area and merging it with the new information. You may find that you must use transparent or reverse transparent mode, for instance, to use or preserve an underlying background color other than white. In this case, you can still do some optimization by filling in the background color for the entire string with a v_bar() call, rather than doing it one character cell at a time.

CLIPPING. VDI output always proceeds faster when the clipping rectangle is turned off, and text output is no exception. Remember that you may only do this if you are drawing into a dialog box, or into the interior of a window which you know is on top. (You can use the WM_TOPPED and WM_NEWTOP messages for keeping track of the top window, or use the WF_TOP wind_get() call to find the current top.) In both of these cases, you will know the width of the drawing area, and you can truncate the output string to fit exactly, rather than setting the clipping rectangle. For this to work, you must have used the byte alignment technique to assure that the width of the writing area is a multiple of eight.

BINDINGS. The normal binding for v_gtext() is inefficient. It copies the string which you supply characterbycharacter into intin[] before it calls the VDI itself. In many cases, it will be more efficient for your application to place characters directly into intin[] and make the VDI trap call directly. To give you a start, the code for the standard v_gtext() binding has been included in the download. When setting up intin[], be sure not to load more than 80 characters, or you will probably crash the system!

MOVING TEXT. When performing text editing on the screen, you should avoid rewriting the string under edit whenever possible. It is always more efficient to use the raster operations to move a string to the right or left, assuming that you have obeyed the byte alignment rule. If you are deleting characters, blit the unchanged part of the screen to the left, and overstrike the last character in the string with a blank. If inserting characters, blit the trailing portion of the string to the right before writing in the new character.

THAT'S IT FOR NOW. This concludes the two article series on simple VDI output. Future columns may explore more complex VDI topics such as proportional text. If there is something you would like to see, please use the Online Feedback to let me know! Meanwhile, the next column will give out the locations of some of the "hooks" and "trapdoors" built into the AES object structure, including how to set up user-defined AES drawing objects.
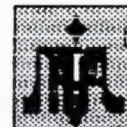
```
>>>>>>>>>> Demonstration of byte alignment of window interior <<<<<<<<<<
#define FEATURES    0x0fef    /* what border features are used */
WORD    msg[8];               /* message from evnt_multi      */
GRECT   work_area;            /* defines working area         */
WORD    w_hndl;               /* handle for window being changed */

        wind_calc(1, FEATURES, msg[4], msg[5], msg[6], msg[7],
                &work_area.g_x, &work_area.g_y, &work_area.g_w,
                &work_area.g_h);
        work_area.g_x = align_x(work_area.g_x);
        work_area.g_w = align_x(work_area.g_w);
        wind_calc(0, FEATURES, work_area.g_x, work_area.g_y,
                work_area.g_w, work_area.g_h, &msg[4], &msg[5],
                &msg[6], &msg[7]);
        wind_set(w_hndl, WF_CXYWH, msg[4], msg[5], msg[6], msg[7]);

>>>>>>>>>>>>>>>>>> Subroutine for above <<<<<<<<<<<<<<<<<<<<<<<<<<<<<

        WORD
align_x(x)                    /* forces word alignment for column position */
        WORD    x;            /* rounding to nearest word                  */
        {
        return((x & 0xfff0) + ((x & 0x0008) ? 0x0010 : 0));
        }

>>>>>>>>>>>>>>>>>>>>> Standard v_gtext binding <<<<<<<<<<<<<<<<<<<<<<<<<<<

        WORD
v_gtext( handle, x, y, string)
        WORD handle, x, y;
        BYTE *string;
        {
        WORD i;
        ptsin[0] = x;
        ptsin[1] = y;
        i = 0;
        while (intin[i++] = *string++)   /* Copy characters to intin    */
                                         /* There is NO error checking! */
        contrl[0] = 8;
        contrl[1] = 1;
        contrl[3] = --i;
        contrl[6] = handle;
        vdi();
        }
```

From Page 3

this next SIG is October 14th; starting at about 7pm. I live at 8057 N. 45th Street in Brown Deer. If you have any questions, call me at 354-1717.

Otherwise, for the rest of you, I'll see you Saturday afternoon, October 18th.

Cud Ya Spit Out an Article or Review for the MILATARI Newsletter

```
10 Rem FINDDATA.BAS - STEVE ARMSTRONG
20 Rem READ Internal Pointers - 8 bit
30 Rem RESTORE resets the READ pointer to the first DATA
statement.
40 Rem BASIC allows restoring the pointer to the specific line
desired.
50 Rem BASIC lacks a statement which points to a specified item
of data.
60 Rem To point to a specific element in a DATA statement:
70 Rem
80 Rem 1) RESTORE to desired line
90 Rem 2) POKE 182,with element number minus 1
100 Rem 3) READ the element (using the proper variable)
110 Rem
120 Rem To locate the first DATA line:
130 Rem
140 Rem 1) RESTORE
150 Rem 2) READ JUNK$
160 Rem 3) LINE=PEEK(183)*256+PEEK(184)
170 Rem Being able to learn this number indirectly allows you
to renumber
180 Rem your program and keep a database of DATA statements.
190 Rem
200 Dim Junk$(40)
210 Data ONE,TWO,THREE,FOUR,FIVE,SIX
220 Data 1,2,3,4,5,6
230 Restore
240 Read Junk$
250 Rem Find out where we are!
260 ? "1ST DATA statement on LINE ";
270 Line=Peek(184)*256+Peek(183)
280 ? Line;:List Line,Line+10
290 ?
300 Rem Read DATA items backwards
310 ? "READING DATA ITEMS BACKWARDS:"
320   For I=6 To 1 Step -1
330   Restore Line:Poke 182,I-1
340   Read Junk$:Print Junk$,
350   Restore Line+10:Poke 182,I-1
360   Read Junk:Print Junk
370   Next I
380 ?
390 ? "POSSIBLE ERROR-OVER POINTING"
400 List 410
410 Restore Line:Poke 182,254
420 ? "RESTORE to: ";Line;:List Line
430 ? "POKE 182,254 forces next line"
440 ? "READ gets 1st item next line";
450 Read Junk$:Y=Peek(182)-1
460 Line=Peek(184)*256+Peek(183)
470 List Line
480 ? Junk$;" READ, ITEM NUMBER ";Y
490 Line=Peek(184)*256+Peek(183)
500 Rem Show random access of DATA
510 List Line-10
520 Position 2,23:? "RANDOM READ: ";
530 Item=Rnd(0)*6:Position 16,23
540 Restore Line-10:Poke 182,Item
550 Read Junk$:? Junk$;"   ";
560 If Peek(764)=255 Then Goto 530
570 End :Rem WORKS FOR BASIC XL TOO!
```
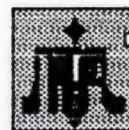
PYRAMID OF DOOM
from Scott Adams
the solution

You notice an oasis and a pole in the sand. Get the pole, then take inventory. The pole was actually a shovel. You also notice you are carrying a flashlight and an empty canteen. Find water and fill canteen. Go Pool. There's a big key here. Get the key, then leave the pool by going east.

Feeling more refreshed, you trudge north, then east. Dig and you will find a tiny key. Go south to the pyramid. There doesn't seem to be a door. Get the stone and the door to the pyramid appears. Dig again, and go into the hole you made. A tiny door with a tiny lock. Unlock Door, and then get out of the hole. Now it's safe to open the door.

Drop the shovel. Light flash and then go door. Take pistol. Drop keys.

Gp north into the dining room, then east. There's a rather large oyster here, and at the moment he isn't about to let you pass through the archway. Get the flute, then go west and south, then south again to the sitting room. Look at the ashes, then the fireplace. A lump of coal and a gold necklace!

Wash Coal. Take inventory and you'll see the coal is a ruby! Play Flute. A cobra slithers out of the basket, and into the fireplace, revealing a secret passage. At this point, you should save the game. In the passage are rats! Eight times out of ten, you can pass them safely, but that other twenty percent of the time they will kill you. With the game saved, drop the flute, then Go Passage, then head north and east to the hieroglyphics room. Reading the hieroglyphics tells you to store your treasures here, so drop the necklace. You can also drop the stone; you only needed it to read the message here. Now get the camel jerky and go west, then north, which will bring you to the oyster. Feed the oyster, and get the pearl. From now on, you can pass through the archway instead of having to go through the passage and being eaten by the rats.

Head west, then south, and you're back at the entrance. Open the sarcophagus, then Go Sarcophagus. It's actually a stairway down. Go down, and come face to face with a fierce mummy.

Burning tana leaves are nearby, so Pour Water, putting them out and the mummy to sleep. Drop canteen and get the tapestry, which reveals an alcove. Go Alcove, and you will find a box and a skull. Get the skull, then look at it. Gold teeth! Get the teeth, then look at the box twice. Ignore the bones and get the glove.

Go west, then back upstairs to the entrance. Go west to leave the sarcophagus, then north, east, and through the archway, and east again. Drop off the tapestry, teeth, and pearl. Then it's back west, north, west, south, and down the sarcophagus again. Go north of the burial room to a passage with a bricked-up doorway. Wear the glove, then smash the door. Remove the glove and drop it. Go Door. This is the mirror room, and you won't be able to keep the light on. Feel Floor and you will discover a coin. Get it, then go East. Light Flash, and you find yourself in a dressing room. Get the scarab, then go west. Go west once more, and light the flash.

You're in the passage. Head south twice, and you're in a tall room with a skeleton. Drop the skull. The skeleton comes alive and pulls a lever that exposes a ladder up. Go Ladder, which takes you to the revolving cavern. Go south to the ledge, and pick up the sapphire.

Throw the ruby. It flies over the ledge and into the acid pool below. Go south to the prison cell. Look at the dead explorer and also the rubbish. Get the pin and the carving. Go west, then down again and north to the burial room. Go up and make a trip to drop off your treasures.

On the way back to the sarcophagus, pick up the two keys. Go down, and from the burial room, first go north and get the rope and the glove, then back south twice to the ladder. Get the saw, then go up. Back in the revolving cavern, you go south to the ledge. Throw rope, which mysteriously attaches itself to something in the hole allowing you to Go Rope. This is the throne room, where you find a chain, a chest, and a pile of metal. Open the chest and get the crown, then pull the chain, revealing a spiral staircase. Go Stairs to the treasure room.

Wear the glove and unlock the chest. You need both keys to do it, and the glove protects you from the poison needle. Drop the keys and the glove, then get the bracelet. Saw Bars, and then you go to the window, get the platinum bar, and return west to the treasure room. It's time to drop off the goodies again, so go down the staircase, then down the rope, west to the cavern and down the stairs.

You can find your way to the treasure room by now, so just head along over there and leave the treasures. Head west, then north, then west again into the dining room. Saw table and out comes the final treasure! Grab hold of it, go back to the treasure room, drop it and then Score.

CONGRATULATIONS!! You have just solved the PYRAMID OF DOOM!
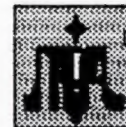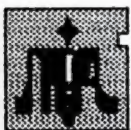
RANDOM BYTES
by Steven Tupper

I recently recieved my August newsletter and read with great intrest the article about the woes of MAIL ORDER. At that time I had had an order with a local mail order firm, COMPUTABILITY, for a P:R:CONNECTION. I had placed the order on July 1st and this was the middle of August afterall. When I placed my order I was told that all of their stock had been sold through the mail. They also told me that their next shipment from ICD was due in early the next week. Confident that I would not have a long wait I placed the order. Over the ensueing week and several calls I was about ready to give up on the order,much to the delight of my wife, about this time I picked up a copy of the SEPT. ANTIC. To my delight a promise of a review of the p:R:CONNECTION was promised in the OCT. issue. I told myself that I would wait until the review was out before I would go out and try again to make the purchase. Two weeks later what to my suprise do I get but a call from COMPUTABILITY telling me that the P:R:'s have finally arived. Now the big decision do I wait for the review or take the chance and get it now. GO FOR IT!! That was it I was on my way to pick it up.

"The Review" sort of!

Now at home I do the unforgivable ,I read the manual before I do anything else. It gave me all the information that I need to get my serial printer up and running. It also included the information needed to run a modem or parallel printer.

"The bad news"

Reason number two for writting this. My OCT. ANTIC arrived at the local bookstore. I rushed out to read the review that had been promised for this issue. After buying it and taking it home I opened to page 45 and started to read the review. After reading half the article I began to wonder if Kurt Oestreich had just read the manual and written his review or if he had done anything with it. Then in the fourth paragraph he says that one of the three terminal programs is better than the other two. So I figure maybe he did not just read the manual and I proceed to read on. The fifth paragraph is the end of what I could bear to read and the nudge that got me to write. Kurt discovers that he could not get Atari's Plato cartridge to work with the P:R:Connection. The owners manual on page 49 tells you that it does .ot work with Plato. So just what did he do to write his article? I don't know.

This experience will for a long time cast a long shadow on the reviews that I read in ANTIC

COPY][ST
DISK COPYING UTILITY
Reviewed by:
Stephen M. Frye

SCORECARD
Features - 10
Installation - 10
Performance - 10
Ease of use - 10
Error Handling - 10
Documentation - 7
Compatibility - 10
Support - 9

From:
Central Point Software, Inc.
9700 SW Capitol Highway
Suite 100
Portland, OR 97219

Central Point Software's Copy][series of disk copying utilities has achieved a reputation of being one of the best methods available to make back-up copies of copy-protected software. Central Point has produced versions of this software for the Apple][Series and Macintosh, the Commodore 64 and 128, the IBM PC and compatibles, and recently added the Atari ST series to this list.

FEATURES

Copy][ST provides three methods of copying software: sector copy, sector copy with format, and bit copy. Sector copying provides fast duplication for programs that are not copy-protected. Sector copy with format allows for copying a program at the same time the new disk is being formatted, which eliminates a separate formatting operation. Bit copy makes an exact duplicate of each bit on the original disk, and is therefore most useful in making backup copies of protected software.

Each of the three copying methods can be tailored to the user's hardware configuration and to the specific copying task being performed. Hardware options allow for the use of one or two disk drives, as well as for the use of double sided disk drives, if the system is so equipped. Copying options can specify the starting and ending tracks of the
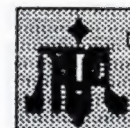
original disk that are to be copied. All of these options are selected by pointing and clicking with the Atari ST mouse.

INSTALLATION

Installing Copy][ST is easy. Since the program is not copy-protected, making a backup copy for daily use, or installing the program on a hard disk presents no problems. Please honor Central Point's non-protection policy, and do not give out or accept copies of this program. Copy][ST is started by double-clicking on the program icon from the desktop.

PERFORMANCE AND EASE OF USE

Once Copy][ST is started, a GEM window appears. At the top left of the window are two large buttons marked "Start" and "Stop". Below and to the right are various option-selecting boxes, and at the bottom of the window is a "Copy Status" box which monitors the progress of the copying operation.

To copy a disk, you select the desired option with the mouse, insert the source disk into the proper disk drive, and click on the "Start" button. If only one disk drive is being used for copying, dialog boxes appear on the screen informing you when you should change disks.

Copy][ST's copying speed varies with the type of operation being performed. Normal sector copying is the fastest, and is about as fast as the regular disk copying operation performed from the desktop. Sector copy with format is slightly slower, and bit copying is the slowest at about half the speed of sector copying.

Since Copy][ST's sector copy option is no faster than performing the same operation from the desktop, there is no advantage in using the program to copy unprotected software and data. I used Copy][ST to make duplicates of copy-protected software, and the program works as advertised.

Central Point Software supplies a

list of programs that have been tested and satisfactorily duplicated using Copy][ST. By following the instructions on this list, I was able to make backups of every copy-protected program I own. The backups of these programs were then tested, and each one performed satisfactorily.

ERROR HANDLING

No bugs were detected while using Copy][ST. If the user determines that an error was made when selecting the copying options, the copy operation can be aborted by using the "Stop" button. Copy][ST also provides useful dialog boxes which, when heeded, should eliminate the possibility of destroying the original software disk.

DOCUMENTATION

Central Point Software provides a 16-page operating manual with Copy][ST. The manual contains neither a table of contents nor an index. The small size of the manual is not a detriment to the user, as each feature of the program is explained simply and completely, without embellishment. The manual is well written, neatly printed, and well organized.

SUPPORT

Registered users of Copy][ST receive product support from Central Point Software, and are informed by the company of product improvements and updates. Central Point has a standing policy of improving all of the Copy][series programs to handle new copy-protection schemes as they arise. Central Point's customer support number, while not toll-free, is answered by courteous people who know their product.

SUMMARY

Software copying utilities are programs that belong in every computer user's program library. Copy][ST is one of the best of these programs available. The program is easy to use, and works as advertised. Copy][ST is a worthy member of Central Point Software's Copy][series.

THE NOLAN FUZZY REVIEW

by Gary Nolan

RAH-RAH-RAH -- SIM BOO BAA
What a board meeting that was!!!

Perfect strangers were on their feet cheering our every word and decisions. I wonder if the Packer - Bear game on big screen TV had anything to do with the crowds actions? Naaaaa!

Some important changes are being considered. Changes that will affect you and the way, and place, meetings are held. First is an increase in dues of $5 per year, and the other is the possibility of moving the meeting site to UWM or another "free" site.

As you may or may not know the club's finances have been strained for the last several months. This is due to several reasons one of which has been a slowly declining membership and steady expenses. The three biggest drains have been the cost of the meeting site, publishing & mailing of the newsletter and the BBS. Lets take a look at these one at a time.

First, the meeting site. Ambruster school was selected because we outgrew the Waukesha State Bank meeting room and we had a sharp attendance drop off when we tried UW Waukesha. Which by the way has an excellent set-up. We chose the present site when we could not find a location that was first free costwise, and secondly available every third Saturday. And almost as important, gave us the flexibility of extra rooms for classes and sub-meetings. UWM was rejected at that time because there were strong objections to it. This issue is being raised again. Are there fewer objections to UWM now? We don't know! You haven't told us! Have you even thought about it? Well please do. We need YOUR opinion on the subject. Don't sit back and crab and complain and threaten to boycott the meetings if they're held "down there". Come to the November meeting and let YOUR feelings be known. Meeting at UWM will save the club $65 a month. A cost by the way that could be offset to a large degree if you dropped 50 cents or a dollar in the contribution can when you came to the meeting.

Second, the newsletter. We have attempted to hold down the cost of the N/L in a number of ways. Eliminating most of the "Free" copies sent out to individuals and clubs that do not exchange N/L's with us, looking for the cheapest printer and obtaining a bulk rate mailing permit have been some. We have tried to offset the expense by trying to get dealers to advertise in the newsletter. Some strung us along by saying that they were "thinking about it", they took so long to "think" it out that they went out, out of business that is. Some told us flat out they had no interest in doing it because we would only tell people to buy from mail order houses anyway. They went out of business too. Others just couldn't decide yes or no. They later decided to drop Atari so that settled that. Then there was the lamest excuse ever. We don't want to "get involved" with user groups. That's understandable seeing as how we're all pirates and the only reason we hold meetings is so we can copy software and teach the latest protection breaking schemes. Only one dealer has seen fit to advertise with us, Computer Software Center who just moved to larger quarters at 10710 W. Oklahoma Ave. (in the Oakridge Shopping Center). They've been doing it for over three years. And for that they deserve a big thank-you, so, THANK-YOU!!! We could show our support of them by shopping for our software at their store. We are about to embark on another attempt at drumming up advertising support shortly. I don't know if I'm up to listening to all the reasons they'll have for not doing it. But this time we've got some help from the people at Batteries Included. They will re-imburse the dealers with merchandise for the cost of the ad. Maybe I'll make the rounds just to hear the "creative" reasons they will come up with.

Third, the BBS. The BBS has been more expensive than we anticipated due to TWO lightning strikes and the replacement and upgrading of equipment. The latest is the addition of a 1200 baud modem. The BBS has attempted to "pay it's way" by acting as a source of new public domain software for the library. Different schemes have been tried to induce members to upload programs with varying degrees of success (sort of). But by and large that portion of the membership that own modems and call other boards to pick up PD software have kept it to themselves. Now don't get excited, I didn't say ALL of you just MOST of you. Every Sysop has tried to serve the membership the best he could and has received a lot of flack and cheap shots for his efforts.

What can you do to help?

A LOT. Get involved! Demo a program at a meeting. It's Easy! REALLY!

Get nervous in front of a group of people? Write a review for the newsletter. You've got a computer, right? How about a Word Processing program? NO? Well if you can get to a typewriter we can find a way to get it into the N/L. When you stop at a dealer to buy that latest piece of software or hardware, ask them why they don't advertise in the MILATARI newsletter. And ask if they will demo a program at a meeting. After all they have a store full. They can send one of the salespeople over and let them run it if they don't trust us to do it. Ask them if they'll pass out our flyers or at least give us a little room to put a stack where they can be seen. Help us find ways to promote the club and get the word out that there is a club. Some people really think that Atari either went out of business or was bought out by Commodore a couple of years ago.

Those in charge of the club can't make the best decisions without your input and advice. GET INVOLVED.

COME ONE, COME ALL

If you missed the last meeting you missed hearing me mention the possibility of an all Atari show to be put on in the Chicago area. We have been asked to take part in putting this show together, along with several other groups. And while most people at the meeting said that they would attend the show only a few said that they would volunteer to help with our part of the work. Lets review whats taken place so far. The first exploratory meeting was held in Chicago last month. Present were representatives from about a dozen groups, three form Wisconsin and the rest form Illinois, and Sandi Austin the User Group Coordinator for Atari who flew in from California just for this meeting. Sandi told us what was involved in putting together two shows in Cal., one in San Diego and the other in San Jose. We can also expect to receive information from other groups that put on shows before this one. A show in Chicago would not be held until August or Sept. of '87, so there's plenty of time to gather info. Other questions that were asked of Atari will have to be answered before the next committee meeting on Oct. 4th if a decision is to be made then. The board has decided that if a show is held in this area Milatari will be part of it. Then we will have to have your help in a real way not just moral support. If you want this group to continue to serve you, you will have to start serving the group! If by chance you'd like to start now give Ron or myself a call.

I LOVE IT! I LOVE IT! I LOOVE IT!!!
(A rumor a day keeps boredom away)

In case you haven't heard Atari is planning to go public in the very near future (maybe by the time you read this) with a 4.5 million stock offering. Price is said to be between $11.50 and $13.50 a share and will be managed by Paine Webber. But if "Daddy J" is as padded with cash as some say, what does he need the money for? Here comes the good part, and if your sharp you've already guessed it. Why to buy COMMODORE of course. A couple of months ago "DJ" was negotiating to buy the Amiga from the big "C" but decided to go for the whole ball of wax. Some say it's to get the new super graphics Amiga. Atari already has a 32-bit machine that features 4 MEG of RAM, a 68020 chip with color monitor for $2000.

Well that's it for this month. Remember if you'd like to help with any of the above mentioned projects call and let us know. BYE................

MILATARI BBS 414-781-5710 24 Hours 300 Baud
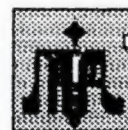
"V:" A Memory Storage Device

If you have been following the 256k 800XL upgrades and haven't gotten one, because of caution, or you have an older machine, here's a program to try.

V: a memory storage device was presented in the pages of ANALOG computing June 1985. It is a short program, 45 very short lines. It works on all Atari's and is loaded in page 6. The basic listing creates an object file that is Binary loaded, or it can be renamed to AUTORUN.SYS.

V: is a simulated disk drive. It holds only one file at a time, because it does not allow for filenames. The size of the storage will vary with memory size. I have stored a 101 sector program in V: with my 64K 800XL. Also the DOS copy functions will sometimes erase material stored in "V:", so be aware.

Now that you've typed in the listing, built a file, and are all loaded up, let's test it out. You have done this ? Well, I'll test it for you.

Load in a basic program, say 30 to 40 sectors long, then list it to make sure it's there. Now type SAVE"V:" <RETURN>. Next type NEW <RETURN>, then verify that the program is gone by typing LIST again. OKAY, it's gone, now type LOAD"V:".On the READY prompt type LIST again. There it's back just the way it was. This is an easy and fast way of clearing out cluttered variable tables. It is also a fast way of temporarily storing a program before you go to DOS to check on something and return without having a MEM.SAV on disk.

I have provided the listing below so try it out, and have fun.

```
1   REM ===================
2   REM V: A MEMORY DEVICE
3   REM ===================
4   REM
5   REM by Philip Altman
6   REM
7   REM THIS PROGRAM CREATES A
     BINARY
8   REM FILE (D:V.OBJ) WHICH LOADS
     AND
9   REM RUNS THE V: HANDLER
10  OPEN #1,8,0,"D:V.OBJ"
11  PUT #1,255:PUT #1,255:PUT #1,4
12  PUT #1,6:PUT #1,203:PUT #1,6
13  TRAP 15:FOR I=1 TO 1000
14  READ D:PUT #1,D:NEXT I
15  PUT #1,224:PUT #1,2:PUT #1,225
16  PUT #1,2:PUT #1,10:PUT
#1,6:END
17  DATA 32,0,0,76,40,6,165
18  DATA 12,141,5,6,165,13,141
19  DATA 6,6,169,4,133,12,169
20  DATA 6,133,13,173,229,2,141
21  DATA 2,6,173,230,2,141,3
22  DATA 6,160,253,200,200,200,185
23  DATA 26,3,208,248,169,86,153
24  DATA 26,3,169,66,153,27,3
25  DATA 169,6,153,28,3,96,80
26  DATA 6,106,6,126,6,166,6
27  DATA 79,6,79,6,160,1,96
28  DATA 165,42,201,8,240,4,201
29  DATA 4,208,245,173,230,2,141
30  DATA 1,6,174,229,2,142,0
31  DATA 6,165,145,208,85,165,42
32  DATA 201,4,240,221,173,0,6
33  DATA 141,2,6,173,1,6,141
34  DATA 3,6,208,207,174,0,6
35  DATA 134,203,174,1,6,134,204
36  DATA 160,0,177,203,164,203,208
37  DATA 3,206,1,6,206,0,6
38  DATA 174,3,6,236,1,6,144
39  DATA 175,204,2,6,208,170,160
40  DATA 136,96,174,1,6,134,204
41  DATA 174,0,6,134,203,160,0
42  DATA 145,203,138,208,3,206,1
43  DATA 6,206,0,6,165,145,205
44  DATA 1,6,144,137,228,144,176
45  DATA 133,160,147,96
```

P.S. IF YOU HAVE A FAVORITE UTILITY, WRITE ABOUT IT . I WOULD BE PLEASED TO TRY OUT YOUR FAVORITE TIME SAVER. If it's a magazine goodie include the name and issue date.
                    DAVID S. YOUNG
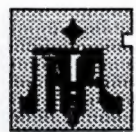
MEMORY TEST FOR EXTENDED RAM
by Larry Copenhaver
Reprinted from KC-ACE 2/86

With the large number of 130XE computers out there, and the increasing number of expanded 800XL and 130XE computers, here's a "down-and-dirty"-"written-in-Basic" memory test. It will only check the EXTENDED RAM (the normal ram can be checked with the built in diagnostics).

The method is very slow and simple. We just set all the bits to off (poke it with zero). Then check to see that they are in fact all off. We then turn on all bits (poke it with 255) and check to see if they are all on. If any discrepancy is found we report that error and end the program.

Of course the extra ram in these machines is accessed by windows of 16k each and we must make visible to the computer these windows (or banks) as they are needed by poking the appropriate value in PORTB (54017).

This little program was written on the night before the printing of this newsletter on the "prototype" 320K 130XE. And used to check all 16 banks of 16K each on this computer (it took about 3 hours to run).

This was really just an interim program to help anyone that thinks they might have a ram problem. Watch for next months Newsletter I will have an Assembly language version that will be much faster.

```
5 REM SAVE"D:EXMEMTST.BAS
10 REM EXTENDED RAM TEST
20 REM ···················
30 REM BY LARRY\COPENHAVER
40 REM ···················
50 GOSUB 1000
54 POKE 82,3:GRAPHICS 0
60 PRINT "WARNING--THIS WILL TAKE A LONG TIME"
65 PRINT " (IT IS WRITTEN IN BASIC YOU KNOW)"
70 PRINT :PRINT :FOR WAIT=1 TO 900:NEXT WAIT
71  PORTB=54017: BANKSTART=16384: BANKEND=32767:
   PBN=PEEK(PORTB)
74 REM ·······················
75 REM SEE THAT 4 BANKS ARE THERE
76 REM ·······················
77 RESTORE LINE
80 FOR X=1 TO BNKCNT
90 READ BANKVALUE
100 POKE PORTB,BANKVALUE
110 POKE BANKSTART,X:NEXT X
130 RESTORE LINE
140 FOR X=1 TO BNKCNT
150 READ BANKVALUE
160 POKE PORTB,BANKVALUE
170 CHECK=PEEK(BANKSTART)
180 IF CHECK=X THEN PRINT "BANK ";X;" IS THERE!!":GOTO 200
190 PRINT "ERROR IN BANK ";X:POKE PORTB,PBN:END
200 NEXT X
210 POKE PORTB,PBN
220 REM ·······················
230 REM NOW TURN OFF ALL BITS
240 REM ·······················
250 RESTORE LINE
260 FOR X=1 TO BNKCNT
270 PRINT "TURNING OFF ALL BITS IN BANK ";X
280 READ BANKVALUE
289 REM FILL IT WITH ZEROS
290 POKE PORTB,BANKVALUE
300 REM FILL IT WITH ZEROS
310 FOR Y=BANKSTART TO BANKEND
320 POKE Y,0
330 NEXT Y:NEXT X
350 REM ·······················
360 REM NOW CHECK ALL BITS
370 REM ·······················
380 RESTORE LINE
390 FOR X=1 TO BNKCNT
400 PRINT "CHECKING ALL BITS IN BANK ";X
410 READ BANKVALUE
420 POKE PORTB,BANKVALUE
430 REM CHECK FOR ZEROS
440 FOR Y=BANKSTART TO BANKEND
450 A=PEEK(Y): IF A=0 THEN GOTO 480
470 PRINT "ERROR IN BANK ";X:POKE PORTB,PBN:END
480 NEXT Y
490 PRINT "NO ERRORS SO FAR IN BANK ";X
500 NEXT X
510 POKE PORTB,PBN
520 REM ·······················
530 REM NOW TURN ON ALL BITS
540 REM ·······················
550 RESTORE LINE
560 FOR X=1 TO BNKCNT
570 PRINT "TURNING ON ALL BITS IN BANK ";X
580 READ BANKVALUE
590 REM FILL IT WITH ONES
600 POKE PORTB,BANKVALUE
610 FOR Y=BANKSTART TO BANKEND
620 POKE Y,255
630 NEXT Y: NEXT X
650 REM ·······················
660 REM NOW CHECK ALL BITS
670 REM ·······················
680 RESTORE LINE
690 FOR X=1 TO BNKCNT
700 PRINT "CHECKING ALL BITS IN BANK ";X
710 READ BANKVALUE
720 POKE PORTB,BANKVALUE
730 REM CHECK FOR ONES
740 FOR Y=BANKSTART TO BANKEND
750 A=PEEK(Y)
760 IF A=255 THEN GOTO 480
770 PRINT "ERROR IN BANK ";X:POKE PORTB,PBN:END
780 NEXT Y
790 PRINT "NO ERRORS SO FAR IN BANK ";X:NEXTX
810 POKE PORTB,PBN
820 PRINT :PRINT " ALL PASSED!!!":END
900 DATA 129,133,137,141
910 DATA 129, 133, 137, 141, 161, 165, 169, 173, 193, 197, 201,
   205, 225, 229, 233, 237
920 DATA 129,133,137,141,193,197,201,205,225,229,233,237
930 DATA 161,165,169,173,193,197,201,205,225,229,233,237
1000 GRAPHICS 0
1010 ? :? :? "WHICH COMPUTER IS THIS?"
1020 POKE 82,6:?
1030 ? "1. 130XE (STANDARD)"
1040 ? "2. 130XE (320K)"
1050 ? "3. 800XL (NEWELL VERSION)"
1060 ? "4. 800XL (KCACE VERSION)"
1070 TRAP 1000:INPUT ANSWER
1080 ON ANSWER GOTO 1100, 1200, 1300, 1400
1090 GOTO 1000
1100 LINE=900:BNKCNT=4:RETURN
1200 LINE=910:BNKCNT=16:RETURN
1300 LINE=920:BNKCNT=12:RETURN
1400 LINE=930:BNKCNT=12:RETURN
```

MILWAUKEE AREA ATARI USER'S GROUP AND NEWSLETTER INFORMATION

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Milatari BBS
300 Baud 24hrs. 414-781-5710

NEWSLETTER INFORMATION

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Your contributions of articles are always welcome. You may submit your article on ATARI compatible cassette or diskette, on typewritten form or you can arrange with the editor to upload your file via modem. You can send Graphics eight or seven plus screens stored on disk in Micropainter or Micro Illustrator formats.

Milwaukee Area Atari User's Group

MILATARI is an independent, user education group which is not affiliated with ATARI INC. The newsletter is the official publication of MILATARI and is intended for the education of its members as well as for the dissemination of information concerning ATARI computer products.

MILATARI membership is open to individuals and families who are interested in using and programming ATARI computers. The membership includes a subscription to this newsletter and access to the club libraries. The annual membership fee is $15 for individuals or $20 for a family.

Vendors wishing to display and/or sell items at MILATARI meetings must make prior arrangements with the club vice president. Rates are $10 per meeting or $90 per year payable in advance.

All material in this newsletter not bearing a COPYRIGHT message may be reprinted in any form, provided that MILATARI and the author are given credit.

Other computer user groups may obtain copies of this newsletter on an exchange basis.

MILATARI ADVERTISING RATES

This newsletter will accept camera ready advertising copy from anyone supplying goods and services of interest to our membership.

Current paid members of MILATARI may place classified ads in the newsletter at no charge.

Advertising Rates

Full page	$37.50
Half page	$20.00
Quarter page	$12.50
Business card	$2.00

MIA

MILWAUKEE AREA ATARI USERS CLUB

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